REMARKS

Claims 1-30 are pending in the Office Action. Claims 1, 2, 21, and 22 have been amended to clarify the claim language only and do not narrow the scope of the claims. Claims 24-30 have been cancelled. No new matter has been added. The rejections of the claims are respectfully traversed in light of the amendments and following remarks, and reconsideration is requested.

Election/Restrictions

A restriction was required under 35 U.S.C. § 121. Applicants elect to prosecute Claims 1-23 of Group I without traverse.

Abstract Objection

The Examiner objected to the abstract of the disclosure because the abstract should be no longer than 150 words in length. The abstract has been amended.

Rejection Under 35 U.S.C. § 103(a)

Claims 1-12, 14-16, and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ahuja et al. (U.S. Pat. No. 6,175,869 hereinafter "Ahuja") in view of Hall et al. (U.S. Pat. No. 6,138,119 hereinafter "Hall").

In rejecting the claims, the Examiner writes in part:

> Regarding claim 1 . . . Ahuja does not teach the control object and performing by the control object as claimed. However, Hall teaches providing a control object capable of specifying an action depending on the data communication (see col. 18 lines 17-59). . . . Therefore it would have been obvious to have used the control object in Ahuja as taught by Hall because it would provide a way to state rules about an associated digital object and control the usage of digital object based upon control information specified by the rule [so as] to improve ability of controlling usage of resources.

However, there is no motivation to combine Ahuja and Hall. Ahuja discloses the following:

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> The invention provides improved client-side techniques for processing client requests to a network service hosted by a pool of servers. (Ahuja, col.2, ll.16-18) (emphasis added).
>
> The client agent intercepts the client request and routes it to a particular one of the servers in the pool. The client agent bases its routing decision on address information regarding the individual servers of the pool and performance data regarding processing of previous client requests directed to the service. (Ahuja, Abstract).
>
> The invention can deliver significantly improved performance in processing client requests, while imposing only minimal additional overhead. (Ahuja, col.2, ll.64-66) (emphasis added).

Thus, Ahuja discloses intercepting a client request for improved processing of such requests by a pool of servers. Ahuja does not otherwise disclose or suggest intercepting data communications for performing a data rights management action.

Hall discloses a "descriptive data structure" that provides "an abstract representation of a rights management data structure such as a secure container." (Hall, Abstract).

Hall further discloses the following:

> The . . . descriptive data structure may comprise a shorthand abstract representation of the format of the data within a rights management related data structure. (Hall, col.5, ll.38-40).
>
> The descriptive data structure can be used as a "template" to help create, and describe to other nodes, rights management data structures including being used to help understand and manipulate such rights management data structures. (Hall, col.5, ll.50-53) (emphasis added).
>
> . . .
>
> These descriptive data structure (DDS) templates may be used to create containers. A choice among two or more possible DDSs may be based upon one or more classes and/or one or more classes may be based on parameter data. (Hall, col.6, ll.37-41) (emphasis added).
>
> . . .
>
> The descriptive data structure allows the provider to protect the integrity of his or her content, by enabling the specification of integrity constraints. Integrity constraints provide a way to state integrity related rules about the content. (Hall, col.7, ll.51-55) (emphasis added).

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Hall does not otherwise disclose or suggest intercepting a data communication between two applications or the need to do so to utilize a descriptive data structure. Instead, Hall discloses that descriptive data structures are "packaged within a container." (Hall,

col.17, ll.12-32). Accordingly, neither Ahuja nor Hall disclose or suggest an incentive to combine the references.

Furthermore, assuming arguendo that Ahuja and Hall were combined, Ahuja in view of Hall fall short of disclosing all the limitations of Claim 1. As previously mentioned, the Examiner writes in part that "[r]egarding claim 1, . . . Ahuja does not teach the control object and performing by the control object as claimed." The Examiner continues, stating that "[h]owever, Hall teaches providing a control object capable of specifying an action depending on the data communication (see col. 18 lines 17-59)."

Hall discloses the following:

> Descriptive data structures 200 provided in accordance with the present invention can provide a degree of interoperability between source and target rights management environments. (Hall, col.17, ll.46-49) (emphasis added).
>
> [A] provider that defines an object within a source rights management environment may create a descriptive data structure for use by processes within one or more target rights management environments. For example, an object creator or other provider can specify, within a descriptive data structure 200, certain rules, integrity constraints and/or other characteristics that can or should be applied to the object **after** it has been imported into a target rights management environment. (Hall, col.17, ll.56-64) (emphasis added).
>
> FIG. 10A shows an example of how descriptive data structures 200 may be used to provide interoperability. In the FIG. 10A example, a DDS creation tool 800 creates a DDS 200 that includes one or more target data blocks 801. (Hall, col.18, ll.17-20) (emphasis added).
>
> Target data block 801 may provide information used to provide interoperability with a particular target environment 850. A single DDS 200 can, in one example, provide interoperability with N different target environments 850 by including N target data blocks 801(1), . . . 801(N) each corresponding to a different target environment 850(1), . . . 850(N). (Hall, col.18, ll.37-43) (emphasis added).
>
> In this example, each target data block 801 includes rule (control) information. Different target data blocks 801 can provide different rule information for different target environments 850. The rule information may, for example, relate to operations (events) and/or consequences of application program functions 856 within the associated target environment 850. (Hall, col.18, ll.44-50) (emphasis added).

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Thus, Hall discloses providing rule information for particular target environments to provide interoperability between source and target environments. Hall does not disclose a control object capable of specifying an action depending on the intercepted data communication or capable of monitoring user actions.

In contrast, amended Claim 1 recites, "intercepting a data communication between a first application and a second application without changing the functionality of the first application and the second application . . . providing a control object capable of specifying an action depending on the intercepted data communication."

Similarly, Claim 19 recites, "intercepting user actions by an intercept application" and "monitoring user actions intercepted by the intercept application by the control object."

Similarly, Claim 21 recites, "a control object which monitors a plurality of user actions and authorizes implementation of the user actions on the digital object according to the control rights" and "an intercept application which intercepts the user actions, mimics the functionality of the document server application, and performs the user actions on the digital object."

Therefore, because neither Ahuja nor Hall, alone or in combination, disclose or suggest all the limitations of Claims 1, 19, and 21, Claims 1, 19, and 21 are patentable over Ahuja in view of Hall.

Claims 2-12 and 14-16 are dependent on Claim 1 and contain additional limitations that further distinguish them from Ahuja in view of Hall. Therefore, because neither Ahuja nor Hall, alone or in combination, disclose or suggest all the limitations of Claims 2-12 and 14-16, Claims 2-12 and 14-16 are patentable over Ahuja in view of Hall.

Claim 20 is dependent on Claim 19 and contains additional limitations that further distinguish it from Ahuja in view of Hall. Therefore, because neither Ahuja nor Hall, alone or in combination, disclose or suggest all the limitations of Claim 19, Claim 19 is patentable over Ahuja in view of Hall.

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ahuja in view of Hall in further view of Ramstrom et al. (U.S. Pat. No. 5,960,004 hereinafter "Ramstrom"). Ramstrom does not remedy the deficiencies of Ahuja and Hall noted above. Claim 13 is dependent on Claim 1 and contains additional limitations that further distinguish it from Ahuja in view of Hall. Therefore, because neither Ahuja nor Hall nor Ramstrom,

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alone or in combination, disclose or suggest all the limitations of Claim 13, Claim 13 is patentable over Ahuja in view of Hall in further view of Ramstrom.

Claims 17, 18, 22, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ahuja in view of Hall in further view of Knapton, III (U.S. Pat. No. 6,363,486 hereinafter "Knapton"). Knapton does not remedy the deficiencies of Ahuja and Hall noted above. Therefore, because neither Ahuja nor Hall nor Knapton, alone or in combination, disclose or suggest all the limitations of Claims 17, 18, 22, and 23, Claims 17, 18, 22, and 23 are patentable over Ahuja in view of Hall in further view of Knapton.

For at least these reasons, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a) and allowance of Claims 1-23.

CONCLUSION

For the above reasons, Applicants believe pending Claims 1-23 are now in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, the Examiner is hereby requested to telephone Applicants' Attorney at (949) 752-7040.

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on January 22, 2003.

Sandy Kim — January 22, 2003

Respectfully submitted,

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ATTACHMENT A

1. (Amended) A method of intercepting a communication between two applications in a computer environment, the method comprising:

intercepting a data communication between a first application and a second application without changing the functionality of the first application and the second application;

providing a digital object created by the second application;

providing a control object capable of specifying an action depending on the intercepted data communication; and

performing the action specified by the control object on the digital object.

2. (Amended) The method of Claim 1, wherein the first application and the second [applications] application communicate via a predefined communication channel.

21. (Amended) A system of embedding a control object into a hosting application as an interface to determine the control rights of a digital object and to monitor user actions, the system comprising:

a control object which monitors a plurality of user actions and authorizes implementation of the user actions on the digital object according to the control rights;

a hosting application which activates the control object to open the digital object and to read the control rights associated with the digital object;

a document server application associated with the creation of the digital object; and

an intercept application which intercepts the user actions, mimics the functionality of the document server application, and performs the user actions on the digital object.

22. (Amended) A program storage device storing instructions for a computer to perform the method comprising:

providing an intercept application which intercepts user actions sent from the hosting application;

providing an external control agent which monitors the user actions intercepted

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by the intercept application;

registering the intercept application with an operating system;

designating an application associated with the creation of the digital object as the document server application;

designating the intercept application as the active document server of the digital object;

providing rules of usage of the digital object;

activating the external control agent to open the digital object and to read the rules that are associated with the digital object;

sending in-place editing user actions from the intercept application to the external control agent whereby the in-place editing user actions are to be monitored by the external control agent; and

opening of the digital object by the intercept application.

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ATTACHMENT B

Please insert the following paragraph on page 1, line 5.

This application is a continuation of U.S. Application No., filed on [ ], which is hereby incorporated herein for all purposes.

Please amend the paragraph on page 13, starting on line 2, as follows:

This section describes the use of the DIT 350 (Figure 4) and DCL 400 (Figure 4) in connection with Microsoft's Active Document Specification. In this system, the DCL 400 enforces security features relating to the usage of data objects of applications that are written using the Active Document Specification. The Active Document Specification is built upon the Microsoft Component Object Model (COM) architecture and is part of Microsoft's Object Linking and Embedding (OLE) family of technologies. The Active Document [specification] Specification is designed to allow a hosting application to embed documents from other applications in the hosting application. For example, Microsoft Word can host a Microsoft Excel spreadsheet that is within a Microsoft Word document. Under the Active Document Specification, a user can work on an embedded document, within the hosting application, without having to move to a separate application window. Additional information regarding the Active Document Specification can be found in the Active Documents Overview as presently located at http://msdn.microsoft.com/library/devprods/vs6/visualc/vccore/_core_activex_documents.htm, "Understanding ActiveX and OLE" by David Chappell (Chapter 11), and "Inside OLE", 2nd edition, by Brockschmidt.

Please amend the paragraph on pages 13-14, starting on line 30, as follows:

In accordance with the Active Document Specification, an Active Document Server negotiates with its hosting Active Document Container for the use of some part of its window space. The Active Document Server also negotiates the incorporation of menu items into the Active Document Container's menus. As a result of these negotiations, the Active Document Server application appears to be part of the Active Document Container application. In reality, the container and server are distinct and individual component applications. The

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negotiations are made through a standard set of interfaces defined by the Active Document Specification. When a user of the Active Document Container accesses user interface features related to the hosted Active Document Server application, these interactions are passed on to the Active Document Server application, again through standard interfaces defined in the Active [Documents specification] Document Specification. Additional interactions between the Active Document Container and Server are required for the following: notifications from the container to the server about when a user is in the window space of the server, when the server needs to refresh its area of the window, when and where the server should save its data, and when the server should shut down. It is noted that the Active Document Specification defines no inherent data security or access control features for its various defined component and application roles. These features are implemented after-the-fact through the described embodiment of the present invention.

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ATTACHMENT C

On page 30, starting on line 5, please amend the abstract as follows:

A system and method for managing the use and access of digital data objects. According to the invention, control rights associated with a digital data object activate an external control object and an intercept application to intercept and monitor communications between a hosting application and a document server application associated with the creation of the digital data object. These intercepting and monitoring functions are performed without affecting or changing the hosting application or the document server application. The external control object activates an intercept application which mimics the functions of the document server application and performs user actions on the digital data object as authorized by the external control object according to the control rights associated with the digital object. By intercepting and monitoring user actions on a digital data object, the invention can control access and use of the digital data object. [Additionally, the invention can record histories of user actions on the digital data object. Moreover, the invention can augment the functions of the document server application associated with digital data object. Further, for security reasons, the invention can restrict use of the digital object to only authorized users. In addition, this invention may accomplish these functions by implementation in connection with Microsoft's Active Document Specification, which is built upon the Microsoft Component Object Model (COM) architecture and which is part of Microsoft's Object Linking and Embedding (OLE) family of technologies.]

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